Amendment to Claims

Please cancel claims 1-16, and please add claims 17-25.

1.-16. (Cancelled)

17. (New) A method for constructing a Bayesian network used to diagnose an issue in a stock brokering domain, the method comprising:

identifying a stock brokering issue to diagnose;

identifying causes of the stock brokering issue;

identifying subcauses of the causes;

identifying diagnostic steps;

matching diagnostic steps to the identified causes and subcauses;

estimating probabilities for the identified causes; and

estimating costs for the actions and questions set out in the diagnostic steps.

18. (New) The method of claim 17 further comprising:

estimating probabilities for the actions and questions set out in the diagnostic steps.

19. (New) The method of claim 17 wherein the stock brokering issue to diagnose is portfolio troubleshooting of an investor's existing portfolio.

20. (New) The method of claim 17 wherein the stock brokering issue to diagnose is portfolio selection.

21. (New) A method for using a Bayesian network to diagnose an issue in a stock brokering domain, the method comprising:

displaying via a user interface one or more questions for guiding a user to identify at least one issue in the stock brokering domain to be solved by traversing questions connected within the Bayesian network responsive to answers to the questions;

responsive to identifying the at least one issue, identifying a cause connected via at least one directed edge in the Bayesian network with the identified issue;

traversing at least one directed edge from the identified cause to an action in the Bayesian network;

displaying via the user interface the action for the user to perform; and

responsive to the user having performed the action, receiving user input indicating whether or not the action solved the issue.

22. (New) The method of claim 21 further comprising:

responsive to the action not solving the identified issue, determining an optimal sequence of one or more actions from a set of actions connected in the Bayesian network to the identified cause which have not already been performed; and

computing an expected cost of executing the optimal sequence.

23. (New) The method of claim 22 further comprising:

computing an expected cost of first asking a question from a set of questions which have not already been answered and the cost of performing the optimal sequence of actions given an answer to the question.

24. (New) A system for constructing a Bayesian network used to diagnose an issue in a stock brokering domain, the system comprising:

means for identifying a stock brokering issue to diagnose;

means for identifying causes of the stock brokering issue;

means for identifying subcauses of the causes;

means for identifying diagnostic steps;

means for matching diagnostic steps to the identified causes and subcauses;

means for estimating probabilities for the identified causes; and

means for estimating costs for the actions and questions set out in the diagnostic steps.

25. (New) A system for using a Bayesian network to diagnose an issue in a stock brokering domain, the system comprising:

means for displaying via a user interface one or more questions for guiding a user to identify at least one issue in the stock brokering domain to be solved by traversing questions connected within the Bayesian network responsive to answers to the questions;

responsive to identifying the at least one issue, means for identifying a cause connected via at least directed edge in the Bayesian network with the identified issue;

means for traversing at least one directed edge from the identified cause to an action in the Bayesian network;

means for displaying via the user interface the action for the user to perform; and

responsive to the user having performed the action, means for receiving user input indicating whether or not the action solved the issue.